

REMARKS

Claims 1 and 4 have been amended. Claims 2 and 3 have been canceled. Thus, claims 1 and 4-9 are now pending in the present application. Support for the amendment to claim 1 may be found in original claims 2 and 3. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejections in view of the amendments and comments presented herein are respectfully requested.

Claim Objection

Claim 3 was objected to under 37 CFR § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 3 has been canceled, thus rendering this objection moot.

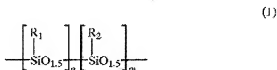
Rejections under 35 U.S.C. § 103(a)

Lin et al. (US 7,191,086)

Claims 1-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lin et al. (US 6,340,734).

At page 3 of the Office Action, the Examiner refers to the silsesquioxane polymer used in Example 4 of Lin, alleging that this silsesquioxane polymer falls under the category of general formula (1) in column 4, lines 52-67, column 5, lines 1-67 and column 6, lines 1-4 of Lin. Claim 1 as amended recites that R¹ in general formula (I) is a methylene group.

The silsesquioxane polymer of Lin is represented by general formula (1) shown below:



In general formula (1), the R¹ groups contain a component comprising an aromatic group bonded to a C₂ (or higher) alkyl group (see column 4, lines 61-62 of Lin). Constituent unit (a1), as recited in Claim 1, has been limited to the presence of methylene group (i.e. a C₁ alkyl group). Thus, the recurring unit on the left-hand side in general formula (1) of Lin does not fall within the scope of the constituent unit (a1) recited in present claim 1.

At page 3 of the Office Action, the Examiner refers to column 5, lines 29-54 of Lin, alleging that "Lin teaches the equivalence of the cyclohexyl group and a phenyl group as the R² group in the formula (1)", and concludes that "it would have been obvious to one skilled in the art to replace the cyclohexyl group with a phenyl group in Lin's polymer in Example 4 with a reasonable expectation of success". In addition, at pages 3-4 of the Office Action, the Examiner alleges that:

In Lin's formula (1), the first repeat unit (such as the 4-hydroxyphenylethylsilsesquioxane) is present in the amount of 5-100 mol% (which gives 0-95 mol% for the second repeat unit) (see col.6, lines 5-7). Since these ranges overlap with present ranges for (a1) and (a2) units, the prior art's teaching renders present ranges *prima facie* obvious. In the case 'where the [claimed] ranges overlap or lie inside ranges disclosed by the prior art,' a *prima facie* obviousness would exist which may be overcome by a showing of unexpected results. *In re Wertheim*, 541, F.2d 257, 191 USPQ 90 (CCPA 1976).

(Emphasis added).

In the case of the presently claimed invention, the unexpected results sufficient to overcome a *prima facie* showing of obviousness are presented in Applicants' specification. These unexpected results were obtained using a silsesquioxane polymer (A) comprising both the constituent units (a1) and (a2) recited in present claim 1 are clearly demonstrated by Examples 15 and 16, and Comparative Example 1 of the present specification. Specifically, in Examples 15 and 16, Resin 1 containing both the (a1) and (a2) units was used. In Comparative Example 1, the same components as those in Examples 15 and 16 were used, except that Resin 2, which contained only the (a1) unit, was used instead of Resin 1 (see page 51, Table 1).

As a result, in Examples 15 and 16, a fine pattern could be formed without thickness loss, whereas in Comparative Example 1, a pattern could not be formed because the thickness loss was too large (see page 54, Table 3). The foregoing results are completely unexpected, and could not have been predicted in light of the cited reference or other knowledge of those having ordinary skill in the art. Accordingly, these unexpected results would rebut any case of *prima facie* obviousness if one were present, and strongly support the nonobviousness of the presently claimed invention.

Hirayama et al.

Claims 1-4 and 6-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hirayama et al. (JP 2004) with its English equivalent, US 2005/0282090.

US 2005/0282090 was published on December 22, 2005, and corresponds to Application No. 10/537,152, filed on May 31, 2005, which is the US National Phase entry of PCT/JP03/015343, filed December 1, 2003, and published on June 17, 2004 in Japanese as WO2004/051376. Because the PCT application was published in a language other than English, it is not effective as prior art under 35 U.S.C. § 102(e). Thus, the earliest effective date as prior art of the subject matter of the cited reference would be the publication date of WO2004/051376 on June 17, 2004. The present application has a priority date of March 19, 2004, which is prior to the effective date of the reference as prior art. Enclosed herewith is a certified translation of the priority application (JP 2004-080481), filed March 19, 2004. All of the present claims are fully supported by the disclosure of the priority application. Thus, Hirayama et al. does not qualify as prior art against the present claims.

In view of the comments presented above, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a).

CONCLUSION

Applicants submit that all claims are in condition for allowance. However, should there be any questions concerning this application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

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